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EXAMINER

USTARIS, JOSEPH G

ART UNIT

PAPER NUMBER

2611

DATE MAILED: 12/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/703,857

Applicant(s)

WOODWARD, SHERYL LEIGH

Examiner

Joseph G Ustaris

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-8, 10-12, 14, 15 and 17 is/are rejected.
- 7) ☒ Claim(s) 5, 9, 13, 16, and 18 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 November 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Fig. 3 step 335 (page 8 line 27). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 6, 14, 15, and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Feldman et al (US006577414B1).

Regarding claim 1, Feldman et al. discloses a CATV system that utilizes a FTTC/H network or "fiber-optic access system". The system includes an optical-electrical converter (OEC) wherein Feldman et al. discloses that the OEC may be in an optical network unit (ONU) or "user interface apparatus" or "optical receiver" with the capability of channel selection or "first adaptor...to select at least one channel

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transmitting signals" used in prior art systems (See column 5 lines 10-25). Using the prior art ONU, the OEC of the ONU converts the optical signals to electrical signals or "second adaptor...convert the signals" to be distributed over the coaxial lines running through the user's home or "customer premises equipment" for use. The fiber running to the ONU and the coaxial lines running through the home of the user makes the CATV system a "hybrid-fiber coaxial cable system" (See column 2 line 65 – column 3 line 26 and Fig. 1).

Regarding claim 2, the prior art ONU disclosed by Feldman et al. has the capability of channel selection or "band selector...to select the at least one channel" (See column 5 lines 20-25).

Regarding claim 6, the ONU receives optical signals that carry digital video and data (See column 3 line 64 – column 4 line 5 and column 6 lines 8-20).

Claim 14 contains the limitations of claims 1 (wherein the ONU receives its signals from a head-end) is analyzed as previously discussed with respect to that claim. Furthermore, the OEC of the ONU is transparent to modulation format and bit rate, thus providing the "same bit rate" on the coaxial side and the fiber side (See column 6 lines 48-62).

Regarding claim 15, Feldman et al. discloses that 64-QAM is used for the modulation format using 6-MHz spaced carriers and providing 30 Mbps, which is about "5 Msymbol per sec" (See column 6 lines 8-20).

Regarding claim 17, the CATV system disclosed by Feldman et al. may be built as a FTTC or a FTTH system (See column 6 line 63 – column 7 line 6).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 4, 7, 8, 10, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feldman et al. (US006577414B1) in view of Chen et al. (US005699105A).

Regarding claim 3, Feldman et al. discloses a CATV system that utilizes a FTTC/H network or "fiber-optic access system". The system includes an optical-electrical converter (OEC) wherein Feldman et al. discloses that the OEC may be in an optical network unit (ONU) or "user interface apparatus" or "optical receiver" with the capability of channel selection or "first adaptor...to select at least one channel transmitting signals" used in prior art systems (See column 5 lines 10-25). Using the prior art ONU, the OEC of the ONU converts the optical signals to electrical signals or "second adaptor...convert the signals" to be distributed over the coaxial lines running through the user's home or "customer premises equipment" for use. The fiber running to the ONU and the coaxial lines running through the home of the user makes the CATV system a "hybrid-fiber coaxial cable system" (See column 2 line 65 – column 3 line 26 and Fig. 1). However, Feldman et al. lacks a system where the ONU receives a signal indicating a channel to send to the OEC or "second adaptor."

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Chen et al. discloses a curbside box or "user interface apparatus" or ONU that is used in a CATV system that can receive broadcasts through fiber optic or coaxial lines and rebroadcast the signals within a household of the user (See Fig. 1). The curbside box contains a converter and a remote controller coupled to it. The remote controller receives signals from a set-top box (STB) indicating a channel that the user wishes to receive or "indicating the at least one channel for transmitting". The remote controller sends the signal to the converter to convert the user requested channel and transmit the converted signal to the user's STB (See column 2 lines 47-64 and column 4 lines 30-47). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the ONU disclosed by Feldman et al. to include a remote controller coupled to the OEC within the ONU, as taught by Chen et al., in order to provide the user a means for controlling the ONU to convert and provide the desired channels to the user's home.

Regarding claim 4, the system disclosed by Feldman et al. in view of Chen et al. allows the user to input the desired channel through a hand held remote or "user input device", which communicates with the STB and remote controller (See column 4 lines 30-35 and Fig. 1).

Claims 7 and 8 contains the limitations of claims 1, 3, and 4 and is analyzed as previously discussed with respect to those claims.

Regarding claim 10, the system disclosed by Feldman et al. in view of Chen et al. utilizes a passive optical network (PON) and uses QAM or an equivalent thereof, where

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QPSK and QAM are similar modulation formats (See Feldman et al. column 3 lines 5-25 and column 4 lines 5-10).

Claims 11 and 12 contains the limitations of claims 1-4, 7, and 14 (wherein the method is preformed by the system disclosed by Feldman et al. in view of Chen et al.) and is analyzed as previously discussed with respect to those claims.

Allowable Subject Matter

4. Claims 5, 9, 13, 16, and 18 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 5, 9, and 13, the prior art of record fails to show or fairly suggest a method or system where the first modulation format is QPSK and that it is converted into QAM format.

Regarding claim 16, the prior art of record fails to show or fairly suggest a method or system where a fiber optic system utilizes QPSK at a symbol rate of 20 Msymbol per sec.

Regarding claim 18, the prior art of record fails to show or fairly suggest a method or system where the HFC plant utilizes a modulation format that requires less spacing between RF channels compared to the fiber optic system.

Conclusion


5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please take note of Young (US006011950A) for his use of QPSK on the downstream of a satellite system that is converted to QAM format to be distributed over a cable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Ustaris whose telephone number is (703) 305-0377. The examiner can normally be reached on Monday-Friday with alternate Fridays off from 7:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Faile, can be reached on (703) 305-4380. The fax phone number for this Group is (703) 872-9306.

Any inquiry of general nature or relating to the status of this application or proceeding should be directed to the Group Receptionist whose telephone number is (703) 305-4700.

JGU
December 15, 2003


ANDREW FAILE
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